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File Code: 3420 **Date:** December 30, 2004
Route To:

Subject: 2004 Douglas-fir Tussock Moth Trapping Results, Sandia RD

To: District Ranger, Sandia RD

The Douglas-fir tussock moth (DFTM) is an important defoliator of mixed conifer, Douglas-fir, and true fir forests of the interior west. Outbreaks can result in spectacular defoliation, top-kill, and mortality to host trees. In addition, hairs from egg masses, larvae, and cocoons can be irritating to some individuals, causing asthma symptoms and severe skin rashes. These insects are seldom noticed between outbreaks, but populations can reach outbreak levels very quickly.

Last summer, an outbreak of the DFTM was detected on 295 acres of the mixed conifer cover type on the west side of the Sandia Mountains in Pino Canyon, just east of the Elena Gallegos City of Albuquerque Open Space. As indicated in our 3410 letter dated November 5, 2004, we plan to visit this area later this spring to determine if defoliation was severe enough to cause tree mortality.

The objective of this letter is to document our fifth-year DFTM male moth survey results conducted at several sites on the east side of the Sandia Mountains along the Sandia Crest National Scenic Byway. This survey uses sticky traps baited with a synthetic version of the female sex attractant or pheromone.

The number of male moth captures in late summer and early fall during the DFTM mating season is used as an indicator of future DFTM population trends. When average trap catches reach 25 or more male moths, visible defoliation of host trees can be expected to occur within the next 2 years.

Five traps were placed at Tree Springs Trailhead, Capulin Springs Picnic Area, Balsam Glade Picnic Area, the Las Huertas Turnoff, and Nine Mile Picnic Area. These traps were placed in the field in July and retrieved in October.

Survey results from 2000-2003 were summarized in our 3420 letter dated February 5, 2004, and are again summarized in Table 1 below along with the 2004 results.

Table 1. 2000-2003 Douglas-fir Trapping Results

Location	Site	Average # of Moths/ Trap 2000	Average # of Moths/ Trap 2001	Average # of Moths/ Trap 2002	Average # of Moths/ Trap 2003	Average # of Moths/ Trap 2004
Sandia RD	Tree Spring Trailhead	20.5	24.5	22.7	13.2	8.4
	Balsam Glade Picnic Area	0	25.8	16.8	25	12.0
	Capulin Springs Picnic Area	8.4	16.8	9.6	11.4	4.0
	Las Huertas Turnoff	*	*	18.3	23.2	7.6
	Nine Mile Picnic Area	0	0.4	1.2	1.2	0.6

* Traps were placed at the Las Huertas Turnoff site for the first time in 2002.

As seen in Table 1, DFTM male moth captures in 2004 decreased significantly at all trapping sites. Trap averages ranged from a low of 0.6 to a high of 12.0. These averages suggest that DFTM populations are presently at low, endemic (undetectable) levels on the east side of the Sandia Mountains.

Based on these data, no visible DFTM defoliation is expected to occur along the Sandia Crest National Byway in 2005. However, because of the existing DFTM outbreak occurring on the west side of the Sandia Mountains and because tussock moth numbers can fluctuate greatly between generations, we plan to check for the presence of the DFTM caterpillars in late May or early June 2005. In addition, pheromone traps will again be placed at the same locations in July 2005. Aerial surveys to detect DFTM defoliation will also resume in the summer of 2005.

If you have any questions regarding this evaluation, please call me at (505) 842-3287 or e-mail me at trogers@fs.fed.us.

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